Appl No. 10/021,450
Amdt. dated April 17, 2006
Reply to Office action of January 17, 2006

REMARKS/ARGUMENTS

The Applicant would like to acknowledge, with thanks, the Office Action mailed January 17, 2006. This amendment and response is responsive to the Office Action mailed January 17, 2006. Claims 1, 3, 5-10, 12, 14 and 16-22 stand rejected. Claims 6, 7 and 18 have been canceled. Claims 1, 10, 12, 14, 16-17 and 21 have been amended to more particularly point out and claim aspects of the present invention. Thus claims 1, 3, 5, 9-10, 12, 14, 16-17 and 19-22 are pending.

I.   REJECTIONS UNDER 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1 3, 6, 8, 10-12, 17 and 19-22 stand rejected as being obvious based on the combination of U.S. Patent No. 6,307,837 to Ichikawa et al. (hereinafter Ichikawa) in view of Kerberos as illustrated by De Clercq et al. (Jan De Clercq and Micky Balladellli "Windows 2000 Authentication," Mach 2001, Digital Press – *hereinafter* Kerberos). Claims 5 and 14 stand rejected as being obvious based on the combination of Ichikawa Kerberos and U.S. Pub. No. 2001/0014088 to Johnson et al. (hereinafter Johnson). Claims 7, 9, 16 and 18 stand rejected as being obvious based on the combination of Ichikawa and U.S. Pub. No. 2003/0041266 to Ke et al. (hereinafter Ke). Withdrawal of these rejections is now requested for the reasons that will now be set forth.

By way of review, an aspect of the present invention as recited by independent claims 1, 10 and 21 as currently amended, is for a method (or an access point configured to implement the method) for servicing a VLAN. When a request for access to a network is received from a wireless station, the access point authenticates the wireless station with an authentication server. The access point receives data indicative of a VLAN for the wireless station from the authentication server. The access point accesses a table local to the access point to determine an appropriate broadcast key for the VLAN. The access point transmits the appropriate broadcast key to the wireless station.

By contrast, Ichikawa stores the VLAN information table with VLAN-ID and VLAN-Keys at the authentication server 7-8 (col. 11, lines 64-66 "In addition to above, terminal authentication server 7-8 is provided with VLAN information shown in Table 3 as a table."; *cf.*

Table 3 at top of column 12), not at the access point (the functional equivalent of the access point in Ichikawa is the wireless base station 7-6). The encryption key is shared by all terminals having the same VLAN-ID (col. 12 lines 10-13), whereas an aspect of the present invention as recited in claims 1, 10 and 21 is that the broadcast keys are stored locally at the access point, not at the authentication server, which can enhance security because each access point can have a different broadcast key for the same VLAN. Thus, if a broadcast key is compromised at one access point, the VLAN is still secure at the remaining access points. Therefore, claims 1, 10 and 21 are not anticipated by Ichikawa.

In rejecting claims 1, 10 and 21, the examiner recites column 12, lines 44-61 of Ichikawa for "the access point is responsive to receiving a VLAN identifier for the wireless station to ascertain the appropriate broadcast key corresponding to the received VLAN identifier" (paragraphs 15-16 of last Office Action). However, claims 1, 10 and 21 as now amended recite that the data identifying the VLAN is received from the authentication server and the access point ascertains the data from a table local to the access point (i.e. the table is stored at the access point, not at a remote location such as the authentication server). By contrast, the section recited by the examiner is directed to how the access point processes a packet received from the station (which according to Ichikawa "VLAN information table has a record of VLAN-IDs and an encryption keys [sic] shared by all of the terminals having the same VLAN-ID" col. 12, lines 10-13). Thus, Ichikawa does not teach, suggest or motivate receiving data indicative of a VLAN for a wireless station from an authentication server, ascertaining the appropriate broadcast key for the VLAN from a table local to the access point and sending the appropriate key to the wireless station.

The aforementioned deficiencies in Ichikawa are not remedied by any teaching of Kerberos. Kerberos, like Ichikawa, uses a centralized server to distribute keys (the Key Distribution Center (KDC)), and does not have a table local to the access point that the access point uses to determine an appropriate key for a wireless station based on VLAN data received from an authentication server.

The aforementioned deficiencies in Ichikawa and Kerberos are not remedied by any teaching of either Johnson or Ke. Johnson makes no mention of VLANs. Furthermore, the examiner cites Johnson for teaching the wireless LAN operates in accordance with the IEEE 802.11 standard, which does not remedy the aforementioned defects in Ichikawa and/or

Kerberos. The only mention in Ke about VLANs is that VLANs can be connected to a switch via dedicated communication links (see for example paragraphs 13 & 14). Furthermore, the examiner recites Ke for teaching the step of tagging data to which subnet it belongs, which does not remedy the aforementioned defects in Ichikawa and/or Kerberos. Therefore, neither Ichikawa, Kerberos, Johnson nor Ke, alone or in any combination thereof, teach, suggest or motivate all of the elements of independent claims 1, 10 and 21.

Claims 3, 5, 9 and 19 directly depend from claim 1 and therefore contain each and every element of claim 1. Therefore, for the reasons already set forth for claim 1, claims 3, 5, 9 and 19 are not obvious based on the combination of by Ichikawa and Kerberos.

Claims 12, 14, 16-17 and 20 directly depend from claim 10 and therefore contain each and every element of claim 10. Therefore, for the reasons already set forth for claim 10, claims 12, 14, 16-17 and 20 are not obvious based on the combination of Ichikawa and Kerberos.
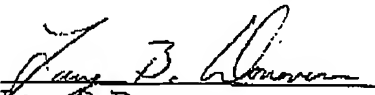
Claim 22 directly depends from claim 21 and therefore contains each and every element of claim 21. Therefore, for the reasons already set forth for claim 21, claim 22 is not obvious based on the combination of Ichikawa and Kerberos.

III.   Conclusion

For the reasons just set forth, Applicant requests withdrawal of the rejections. If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 72255-13066.

Respectfully submitted,

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